



FOREST COVER AND FOREST AREA



The term 'Forest Area' (or recorded forest area) generally refers to all the geographic areas recorded as forest in government records. Recorded forest areas largely comprises Reserved Forests (RF) and Protected Forests (PF), which have been constituted under the provisions of Indian Forest Act, 1927. Besides RFs and PFs, the recorded forest area may include all such areas, which have been recorded as forests in the revenue records or have been constituted so under any State Act or local laws. On the other hand, the term 'Forest Cover' as used in the 'SFR' refers to all lands more than one hectare in area, having a tree canopy density of more than 10%. Thus the term 'forest area' denotes the legal status of the land as per the government records, whereas the term 'forest cover' indicates presence of trees over any land.

The recorded forest area under three categories; viz. Reserved Forests, Protected Forests and Unclassed Forests have been compiled as received from all the States and UTs and the same is presented in Table 3.5. The source of this information in respect of every State/UT is the concerned SFD.

Although most of the recorded forest area has vegetation cover on it, yet there are blanks and areas with density less than 10% within it. On the other hand, there are areas outside the recorded forests with tree cover of more than 10% canopy density. Such areas also constitute forest cover and are included in the forest cover assessment of FSI. Therefore, the changes taking place in the forest cover is not necessarily due to changes within the recorded forest area but because of changes outside recorded forest area also.

It would be, therefore, quite useful if the area of forest cover within and outside recorded forest area is known. This will not only facilitate policy, planning and management of forest areas by the State Forest Departments but also benefit other agencies of Government, NGOs, private landowners and village communities in tree planting efforts.

Mapping of forest cover within and outside the forest areas can be done only if the geo-coded boundaries of the recorded forests are available at an appropriate scale (say 1: 50,000). There is no proper account of forest cover outside recorded forest area. Since the SFDs are the custodians of the details of the recorded forest areas, so if the boundaries of such areas are made available, then the forest cover within and outside the recorded forests can be determined. FSI has approached all the SFDs for providing the boundaries of recorded forests under their jurisdiction but only a few States/UTs namely, Andhra Pradesh, Kerala, Meghalaya and Dadra & Nagar Haveli could provide boundaries that could be used in GIS mode. Area statistics of forest cover along with the changes within and outside the recorded forests have been generated for these States/UT using GIS.

Forest cover distribution within and outside the recorded forest areas (Fig. 3.1) along with the changes in

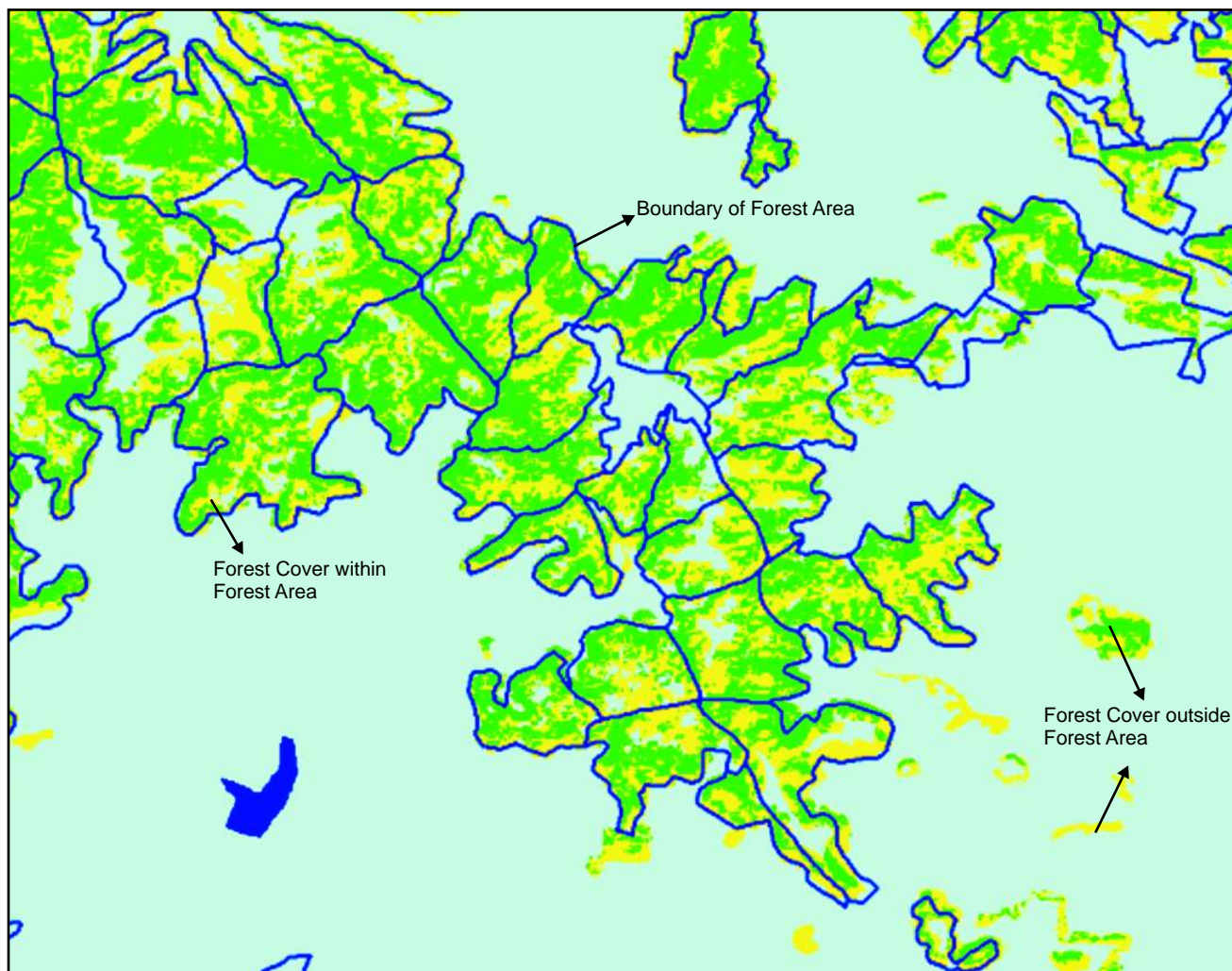


Fig 3.1: Depiction of forest cover within and outside recorded forest area

respect of the above four States/UT are given below.

3.1 Andhra Pradesh

Table 3.1 shows that in case of Andhra Pradesh, of the total forest cover of 44,372 km², only 38,189 km² lies inside the recorded forests. Comparing this with recorded forest area of 63,821 km², only 59.84% is under forest cover.

It may be noted that quite a substantial portion of 6,183 km² forest cover exists outside the recorded forest area.

Comparing the change in forest cover of 2005 with

Table 3.1: Forest cover within and outside forest area in Andhra Pradesh

(area in km²)

Forest Cover	VDF	MDF	OF	Total	Scrub
Within Recorded Forest Area	123	21,484	16,582	38,189	6,679
Outside Recorded Forest Area	7	2715	3461	6,183	3,183
Total	130	24,199	20,043	44,372	9,862

2003 assessment, it is seen that of the total loss of 40 km² in the State during this period, 26 km² has occurred within the recorded forest area due to felling of mature plantations and the remaining 14 km², outside the recorded forests.

3.2 Kerala

Table 3.2 shows that in case of Kerala, of the total forest cover of 15,595 km², only 9,579 km² lies inside the recorded forests. Comparing this with 11,265 km² recorded forest area of the state, 85 % of the recorded forest area is under forest cover.

It may be noted that a substantial portion of forest cover (38.6%) exists outside the recorded forest area.

Comparing the change in forest cover of 2005 with 2003 assessment, it is seen that there is a small (53 ha) gain of forest cover within the recorded forests and no change outside.

3.3 Meghalaya

The Table 3.3 shows that in case of Meghalaya, of the total forest cover of 16,988 km², only 1,046 km² lies inside recorded forests. Comparing this with the recorded forest area of 1,124 km², the State has 93.06 % forest area under forest cover.

It may be noted that most of the forest cover (94%) exists outside the recorded forest area.

Comparing the change in forest cover of 2005 with 2003 assessment, it is seen that of the total gain of 63 km² in the State, only 2 km² is within the recorded forest area and the rest of the increase of 61 km² is outside recorded forests. (area in km²)

Table 3.2: Forest cover within and outside forest area in Kerala

Forest Cover	VDF	MDF	OF	Total	Scrub
Within Recorded Forest Area	935	5,985	2,659	9,579	15
Outside Recorded Forest Area	89	2,651	3,276	6,016	55
Total	1024	8,636	5,935	15,595	70

Table 3.3: Forest cover within and outside forest area in Meghalaya

(area in km²)

Forest Cover	VDF	MDF	OF	Total	Scrub
Within Recorded Forest Area	203	494	349	1,046	2
Outside Recorded Forest Area	135	6,314	9,493	15,942	179
Total	338	6,808	9,842	16,988	181

3.4 Dadra & Nagar Haveli

The Table 3.4 shows that in case of Dadra & Nagar Haveli, of the total forest cover of 221 km², only 169.29 km² lies inside recorded forests. Comparing this with the recorded forest area of 204 km², the UT has about 83% forest area

under forest cover.

It may be noted that a substantial portion of forest cover (23.4%) exists outside the recorded forest area. No change in forest cover compared to 2003 assessment has been found.

3.5 Conclusion

Table 3.4: Forest cover within and outside forest area in Dadra & Nagar Haveli

(area in km²)

Forest Cover	VDF	MDF	OF	Total	Scrub
Within Recorded Forest Area	0	106.20	63.09	169.29	0
Outside Recorded Forest Area	0	23.80	27.91	51.71	0
Total	0	130	91	221	0

Comparing the results of recorded forest area and forest cover of these 4 States/UTs combined, it is seen that of the total forest cover of 77,152.2 km² area in these States/UTs, only 48,983.3 km² or 63.5% lies inside the recorded forests and quite a substantial portion of forest cover (36.5%) exists outside the recorded forests.

Comparing this with 76,414 km² recorded forests in these States/UTs, only 64.1% forest area is under forest cover.

Actual position of forest cover vis-à-vis recorded forest area at the national level could be known only when the geo-

coded boundaries of all the States and UTs are made available. The analysis of 4 States/UTs, however, indicates that a substantial area of the forest cover lies outside the forest area.

Table 3.5: Recorded forest area in States and UTs (area in km²)

State / UT	Geographic Area (G.A.)	Total Forest Area as in SFR 2003	Recorded Forest Area (2005)			Total	% of G.A.
			RF	PF	UF		
Andhra Pradesh	275,069	63,821	50,479	12,365	977	63,821	23.20
Arunachal Pradesh	83,743	51,540	10,546	9,528	31,466	51,540	61.55
Assam	78,438	27,018	17,864	-	8,968	26,832	34.21
Bihar	94,163	6,473	693	5,779	1	6,473	6.87
Chhattisgarh	135,191	59,772	25,782	24,036	9,954	59,772	44.21
Goa	3,702	1,224	237	-	987	1,224	33.06
Gujarat	196,022	19,113	14,067	696	4,199	18,962	9.67
Haryana	44,212	1,558	249	1,158	152	1,559	3.53
Himachal Pradesh	55,673	37,033	1,896	33,043	2,094	37,033	66.52
Jammu & Kashmir	222,236	20,230	17,643	2,551	36	20,230	9.10
Jharkhand	79,714	23,605	4,387	19,185	33	23,605	29.61
Karnataka	191,791	43,084	28,690	3,931	5,663	38,284	19.96
Kerala	38,863	11,268	11,123	142	-	11,265	28.99
Madhya Pradesh	308,245	95,221	61,886	31,098	1,705	94,689	30.72
Maharashtra	307,713	61,939	49,226	8,195	4,518	61,939	20.13
Manipur	22,327	17,418	1,467	4,171	11,780	17,418	78.01
Meghalaya	22,429	9,496	1,112	12	8,372	9,496	42.34
Mizoram	21,081	16,717	7,909	3,568	5,240	16,717	79.30
Nagaland	16,579	8,629	86	508	8,628	9,222	55.62
Orissa	155,707	58,136	26,329	15,525	16,282	58,136	37.34
Punjab	50,362	3,084	44	1,137	1,903	3,084	6.12
Rajasthan	342,239	32,488	11,860	17,652	2,976	32,488	9.49
Sikkim	7,096	5,841	5,452	389	-	5,841	82.31
Tamil Nadu	130,058	22,877	19,388	2,183	1,306	22,877	17.59
Tripura	10,486	6,293	4,175	2	2,117	6,294	60.02
Uttar Pradesh	240,928	16,826	11,509	1,837	3,450	16,796	6.97
Uttarakhand	53,483	34,662	24,638	9,882	131	34,651	64.79
West Bengal	88,752	11,879	7,054	3,772	1,053	11,879	13.38
Andaman & Nicobar	8,249	7,171	2,929	4,242	-	7,171	86.93
Chandigarh	114	34	31	-	2	33	28.95
Dadra & Nagar Haveli	491	204	199	5	-	204	41.55
Daman & Diu	112	1	-	6	-	6	5.72
Delhi	1,483	85	78	7	-	85	5.73
Lakshadweep	32	-	-	-	-	-	-
Pondicherry	480	-	-	-	-	-	-
Total	3,287,263	774,740	419,028	216,605	133,993	769,626	23.41